

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

To:

see form PCT/ISA/220

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/IL2005/000317

International filing date (day/month/year)  
20.03.2005

Priority date (day/month/year)  
06.01.2005

International Patent Classification (IPC) or both national classification and IPC  
H05B33/08

Applicant  
INFRA-COM LTD

### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

### 3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

**10/576343**

International application No.  
PCT/IL2005/000317

**AP20 Recd: PCT/IL 18 APR 2006**

**Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/IL2005/000317

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	1-8
	No: Claims	
Inventive step (IS)	Yes: Claims	1-8
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-8
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

WRITTEN OPINION OF THE  
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AUTHORITY (SEPARATE SHEET)

International application No.  
PCT/IL2005/000317  
18 APR 2006

Re item VIII.

1. It is noted in line 11 of the independent claim 1 that the word "combining" is too vague thus not clear (Article 6 PCT). In particular said word does not define how the pulsed drive voltage DV(t) is obtained from the **pulsed analog data voltage** ADV(t) and the **variable shift voltage** SV(t). For the assessment of the requirements of novelty and inventive step, said word "combining" has been interpreted in the light of lines 19-21 of page 6 of the description and claim 7, as to recite "algebraically superimposing".

Re item V.

1. The following document will be referred to in this written opinion; the numbering will be adhered to in the rest of the procedure:

D1: PATENT ABSTRACTS OF JAPAN vol. 008, no. 231 (E-274), 24 October 1984 (1984-10-24) & JP 59 112670 A (HITACHI SEISAKUSHO KK), 29 June 1984 (1984-06-29)

2. The subject-matter of the independent claim 1 appears to fulfill the requirements of novelty and inventive step (Articles 33 (2), (3) PCT) over document D1, which is regarded as being the closest prior art. Document D1, discloses a *communication driver circuit* in the form of an *output stabilizing circuit for optical digital transmitter* having an optical feedback for adding a signal representative of the monitored light to the input data signal for stabilizing the output of the optical digital transmitter (laser diode). However D1 fails to disclose the features of having a current feedback loop used for increasing or stepwise decreasing, in dependence of the absence or presence of the incoming digital data pulses, a *shift voltage signal* (SV(t)) to be added to a *pulse analog data voltage* (ADV(t)) representative of the incoming digital data pulses, in order to obtain a pulsed drive voltage signal (DV(t)) for driving the communication diodes. The solved problem by the above differentiating features can be regarded as how to provide a more accurate current control, thereby increasing the diodes' useful lifetime.
3. Dependent claims 2-8 relate to preferred embodiments of the claim 1 thus, they appears also to fulfill the requirements of novelty and inventive step (Articles 33 (2), (3) PCT).

**WRITTEN OPINION OF THE  
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International application No.

PCT/IL2005/000317

4. The subject-matter of claims 1-8 appears to fulfil the requirements of industrial applicability (Article 33 (4) PCT).